

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for preparing individualized, glyoxal crosslinked cellulosic fibers having a wet bulk greater than about 20 cm³/g at 0.6 kPa, comprising:

(a) applying only an aqueous glyoxal solution to a cellulosic fibrous web to provide a web of treated fibers;

(b) separating the web of treated fibers into individual treated fibers;
and

(c) heating the individual treated fibers at a temperature and for a time sufficient to provide individualized, crosslinked cellulosic fibers having a wet bulk greater than about 20 cm³/g at 0.6 kPa.

2. The method of Claim 1, wherein the glyoxal is applied in an amount from about 4 to about 15 percent by weight based on the total weight of fibers.

3. The method of Claim 1, wherein the glyoxal is applied in an amount from about 6 to about 10 percent by weight based on the weight of fibers.

4. The method of Claim 1, wherein the temperature is from about 135°C to about 165°C.

5. The method of Claim 1, wherein the time is from about 3 to about 10 minutes.

6. The method of Claim 1, wherein the crosslinked fibers have a wet bulk is greater than about 22 cm³/g at 0.6 kPa.

7. The method of Claim 1, wherein the crosslinked fibers have a wet bulk is greater than about 25 cm³/g at 0.6 kPa.

8. The method of Claim 1, wherein the crosslinked fibers have a brightness greater than about 80 % ISO.

9. A method for preparing individualized, glyoxal crosslinked cellulosic fibers, consisting essentially of:

(a) applying an aqueous glyoxal solution to a cellulosic fibrous web to provide a web of treated fibers;

(b) separating the web of treated fibers into individual treated fibers;
and

(c) heating the individual treated fibers at a temperature and for a time sufficient to provide individualized, crosslinked cellulosic fibers.

10. The method of Claim 9, wherein the glyoxal is applied in an amount from about 4 to about 15 percent by weight based on the total weight of fibers.

11. The method of Claim 9, wherein the temperature is from about 135°C to about 165°C.

12. The method of Claim 9, wherein the time is from about 3 to about 10 minutes.

13. The method of Claim 9, wherein the crosslinked fibers have a wet bulk is greater than about 20 cm³/g at 0.6 kPa.

14. The method of Claim 9, wherein the crosslinked fibers have a brightness greater than about 80 % ISO.

15. A method for preparing individualized, glyoxal crosslinked cellulosic fibers, comprising:

(a) applying only an aqueous glyoxal solution to a cellulosic fibrous web to provide a web of treated fibers;

(b) separating the web of treated fibers into individual treated fibers;
and

(c) heating the individual treated fibers at a temperature and for a time sufficient to provide individualized, crosslinked cellulosic fibers.

16. The method of Claim 15, wherein the glyoxal is applied in an amount from about 4 to about 15 percent by weight based on the total weight of fibers.

17. The method of Claim 15, wherein the temperature is from about 135°C to about 165°C.

18. The method of Claim 15, wherein the time is from about 3 to about 10 minutes.

19. The method of Claim 15, wherein the crosslinked fibers have a wet bulk is greater than about 25 cm³/g at 0.6 kPa.

20. The method of Claim 15, wherein the crosslinked fibers have a brightness greater than about 80 % ISO.